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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/500,387 | 02/08/2000 | Ted Chongpi Lee | | 2538 |

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| EXAMINER | |
|---|---|
| VOLPER, THOMAS E | |
| **ART UNIT** | **PAPER NUMBER** |
| 2697 | 5 |

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/500,387 | Applicant(s) LEE, TED CHONGPI | |
|---|---|---|---|
| | Examiner Thomas Volper | Art Unit 2697 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *8 February 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because they are hand drawn. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

2. Claim 1 is objected to because of the following informalities: The second and third paragraphs are the same as the fourth and fifth paragraphs. Appropriate correction is required.

3. Claim 6 is objected to because of the following informalities: Lines 6-8 of the claim need clarification. There is only antecedent basis for one input/output module, but the claim recites "said input/output modules". Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman, Jr. (US 5,742,605) in view of Lee (US 6,594,236).

Regarding claims 1, 4, 6, 8, 9, 11, Norman discloses a SONET ring network including a

plurality of ADMs (col. 4, lines 50-55; also see Figure 3). Norman also discloses a plurality of DCS elements wherein at least one of the plurality of DCS elements include an ADM that is logically coupled to a SONET network, said ADM being coupled to said at least one DCS by a digital link (col. 6, lines 28-65; also see Figure 5). Node (23) in Figure 5 demonstrates an input/output module of a hybrid DCS that includes at least one ADM. In addition, Norman discloses that it is well known to provide switching control for a Digital Cross-connect System (DCS) based architecture by a Digital Cross-connect Management System (DCMS) (col. 4, lines 26-38). This DCMS represents the DCS EMS of the present invention. Norman fails to disclose that the SONET ADM network elements are managed by a SONET EMS. Lee discloses an EMS that manages ADMs in an optical network (col. 1, lines 25-61). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the EMS of Lee to manage the ADMs in the invention of Norman. One of ordinary skill in the art would have been motivated to do this in order to provide prompt implementation of maintenance and management of optical lines upon recognition of alarm signals.

Regarding claim 2, Norman discloses that the DCMS is connected to the DCS elements via signaling links (81). These signaling links represent a data communication network. Lee discloses that the EMS is connected to the network elements through a LAN (col. 1, lines 38-43). The LAN represents a data communication network.

Regarding claims 3, 5, 7, 10, 12, Norman discloses that broadband DCS element (310) is connected to ring terminals (102, 105 and 108) by standard fiber connections (col. 6, lines 59-65). DCS element (310) includes interface (312), which breaks down each OC-12 connection entering the element into component STS-N signals (col. 7, lines 4-10; also see Figure 6).

6. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman, Jr. (US 5,742,605) in view of Huang et al. (US 6,389,015).

Regarding claims 13 and 17, Norman discloses a SONET ring network including a plurality of ADMs (col. 4, lines 50-55; also see Figure 3). Norman also discloses a plurality of DCS elements wherein at least one of the plurality of DCS elements include an ADM that is logically coupled to a SONET network, said ADM being coupled to said at least one DCS by a digital link (col. 6, lines 28-65; also see Figure 5). In addition, Norman discloses that it is well known to provide switching control for a Digital Cross-connect System (DCS) based architecture by a Digital Cross-connect Management System (DCMS) (col. 4, lines 26-38). The ADM coupled to the DCS represents a hybrid network structure and Figure 3 represents the DCS/SONET network of the present invention. Norman fails to disclose that ADMs used to form hybrid ring networks are decoupled from the DCS/SONET network and are managed by a SONET EMS. Huang discloses a similar DCS/SONET network to Norman in Figure 1. Huang also provides a ring management system (59) that manages those elements on ring (57) (col. 4, lines 13-27; also see Figure 2). Ring management system (59) represents the SONET EMS of the present invention. This system provides for the decoupling of ADMs from the DCS/SONET network because each element on the ring (57) is being managed per that ring. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the ring management system in the invention of Norman to provide ring-based management in addition to DCS/SONET management with a DCMS. One of ordinary skill in the art would have been motivated to provide management per ring in order to optimally balance each link of a ring.

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman, Jr. (US 5,742,605) in view of Huang et al. (US 6,389,015) as applied to claims 13 and 17 above, and further in view of Jakobik et al. (US 6,195,367).

Regarding claim 14, the system provide by the teaching of Norman, Jr. in view of Huang et al. provides all of the limitations of claim 14, except for inserting an additional ADM between a hybrid DCS/SONET structure and a hybrid ring. Jakobik discloses SONET nodes (2 and 3) between a DCS and a plurality of SONET rings in a DCS/SONET network (see Figure 4). In addition, Huang provides the variation of adding additional SONET nodes (37 and 38) between a DCS and a plurality of SONET rings (col. 11, lines 8-28). These SONET nodes (2, 3, 37 and 38) represent the ADMs of the present invention. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add ADMs between the DCS and a hybrid ring in the system provided by the teaching of Norman, Jr. in view of Huang et al. One of ordinary skill in the art would have been motivated to do this in order to provide for more rings to be incorporated into the DCS/SONET network, thus increasing capacity.

Regarding claim 15, see paragraph above regarding claims 13 and 17.

Regarding claim 16, Norman discloses that broadband DCS element (310) is connected to ring terminals (102, 105 and 108) by standard fiber connections (col. 6, lines 59-65). DCS element (310) includes interface (312), which breaks down each OC-12 connection entering the element into component STS-N signals (col. 7, lines 4-10; also see Figure 6).

*Response to Arguments*

8. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

9. Any inquiry concerning this communication, or earlier communications from the examiner should be directed to Thomas Volper whose telephone number is 703-305-8405 and fax number is 703-746-9467. The examiner can normally be reached between 8:30am and 6:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached at 703-308-6602. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Thomas Volper
TV

September 25, 2003

HUY D. VU
SUPERVISORY PATENT EXAMINER
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